

ABSTRACT OF THE DISCLOSURE

The present invention is envisioned to realize miniaturization, low voltage operation and high reliability of a nonvolatile semiconductor memory device, and simplification of its production process. Interpoly dielectric film 109a of the nonvolatile semiconductor memory device is composed of a nitrogen-introduced CVD SiO₂ film, and is used as gate oxide film of MOS transistors in the low voltage region of the peripheral circuit region. Gate oxide film of MOS transistors in the high voltage region of the peripheral circuit region is composed of a laminate of said SiO₂ film 109a and a nitrogen-introduced CVD SiO₂ film. According to the present invention, reliability of gate oxide film of peripheral circuit MOS transistors of the nonvolatile semiconductor memory device and its transistor characteristics are improved. It is also possible to realize miniaturization and low voltage operation of the nonvolatile semiconductor memory device. Further, simplification of its production process is made possible.